Technology breakthroughs propel China's march as global hub

Chinese President Xi Jinping said technological breakthroughs are propelling China's march as a global hub.

"By devoting great energy to implementing the innovation-driven development strategy, we have seen much accomplished toward making China a country of innovators, with major advances made in science and technology," Xi said when delivering a report to the 19th Communist Party of China (CPC) National Congress in Beijing.

The evidence he cited included the successful launch of the Tiangong-2 space lab, the commissioning of the deep-sea manned submersible Jiaolong and of the 500-meter aperture spherical telescope (FAST) Tianyan, the launch of the dark matter probe satellite Wukong and the quantum science satellite Mozi, as well as the test flight of the C919 airliner.

The following is a list of technology breakthroughs the country made in 2017.

1. Tianzhou-1 unmanned cargo spacecraft

Launched on April 20, 2017 from the Wenchang Space Launch Center in south China's Hainan Province, the Tianzhou-1 unmanned cargo completed automated docking with the orbiting Tiangong-2 space lab on April 22. As China's first self-developed cargo spacecraft, it constitutes an important part of China's manned space mission.

2. China's domestic-made aircraft carrier

China's first home-built aircraft carrier was transferred from the dry dock to the water on April 26, 2017. It marked a major achievement in the independent design and construction of an aircraft carrier.

3. Fuxing bullet train

Officially named on June 25, 2017, the Fuxing bullet train was developed by the China Railway Corporation. Capable of running at a routine speed of 350 km/h and a top speed of 400 km/h, it travels between Beijing and Shanghai in only four-and-a-half hours. China owns exclusive intellectual property rights to the trains.

4. C919 airliner

The C919, China's first self-produced large plane, completed its first test flight on May 5 at the Shanghai Pudong International Airport. It was a historic breakthrough in China's aircraft manufacturing, proving that China has acquired core competencies in developing modern aircraft.

5. Detection of pulsars by FAST

China’s 500-meter aperture spherical telescope (FAST) has identified two pulsars, the National Astronomical Observatories announced on October 10, 2017. It was the first time a radio telescope independently developed by Chinese scientists had found pulsars. Launched last September, FAST, the world’s largest single-dish radio telescope, can receive electromagnetic signals from 13.7 billion light years away.

6. Mining of combustible ice

On May 18, the China Geological Survey announced the successful mining of combustible ice in the Shenhu area of the South China Sea. It was the first successful mining of the argillaceous-silt type natural gas hydrate, a substance extremely difficult to extract, which accounts for over 90% of the world’s total reservoir of combustible ice.

7. Mozi quantum satellite

On Aug. 10, Mozi, the world’s first quantum science satellite, realized the world’s first quantum key distribution from a satellite to the ground and quantum teleportation from the ground to a satellite.